UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/544,206	03/10/2006	Antoine Moulin	Q89340	8480

23373 7590 07/10/2007

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
ZHU, WEIPING	
ART UNIT	**PAPER NUMBER**
1742	
MAIL DATE	**DELIVERY MODE**
07/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/544,206	MOULIN, ANTOINE	
	Examiner	Art Unit	
	Weiping Zhu	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1-12 are currently under examination, wherein the claims 1, 3-6, 9 and 11 have been amended in applicant's amendment filed on May 7, 2007. The applicant did not affirm the provisional election made with traverse over the phone on January 24, 2007 by Mr. Richard Tuner in applicant's amendment filed on May 7, 2007 as required in the Office action dated February 5, 2007. Affirmation of the election must be made by applicant in replying to this Office action.

Status of Previous Rejections

2. The objection to the informalities in claims 1 and 2 and the objection to the improper form of multiple dependences in claims 4-6, 9 and 11 are withdrawn in light of the applicant's amendment and arguments filed on May 7, 2007. All the previous rejections of claims 1-3 under 35 U.S.C. 103(a) in the Office action dated February 5, 2007 are maintained as follows:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaoka et al. (US 4,336,080) in view of Chatfield et al. (US 4,159,218).

With respect to claim 1-3, the reasons of rejections are stated in the Office action of February 5, 2007.

With respect to the amended claim 1, the amended feature has not changed the scope of the claim. Therefore, the reasons of rejections as stated in the Office action of February 5, 2007 is applied properly herein..

With respect to the amended claim 3, the amendment of the claim 3 has not changed the scope of the claim. Therefore, the reasons of rejections as stated in the Office action of February 5, 2007 is applied properly herein.

With respect to the amended claim 4, the ground of rejection of claim 3 as stated in the Office action of February 5, 2007 is applied herein properly.

With respect to the amended claim 5, Nakaoka et al. ('080) disclose cold-rolling the strip with a reduction ratio of 75% (col. 10, lines 34-44), which is within the claimed range. A prima facie case of obviousness exists. See MPEP 2144.05 I.

With respect to the amended claim 6 and claims 7 and 8, Nakaoka et al. ('080) disclose continuous-annealing the strip by heating the strip to a temperature within the range of 750° C to 880° C and holding it there for a pre-determined time (i.e. soaking) (abstract). The soaking temperature range overlaps the claimed range. A prima facie case of obviousness exists. See MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the claimed temperature range within the disclosed range of Nakaoka et al. ('080) with expected success, because Nakaoka et al. ('080) disclose the same utility over the entire disclosed range.

With respect to the amended claim 9 and claim 10, Nakaoka et al. ('080) disclose cooling the strip to 750° C by a gas jet followed by a rapid cooling by a water jet with a quenching rate of about 2000° C/sec (col. 10, lines 50-53). Nakaoka et al. ('080) do not disclose the cooling rates as claimed in the instant claim 9. However, it is well held that discovering an optimum value of a result-effective variable involves only routine skill in the art. In re Boesch, 617, F.2d 272, 205 USPQ 215 (CCPA 1980). In the instant case, the cooling rate after the continuous annealing is a result-effective variable, because it would directly affect the carbon content in ferrite and the microstructure of the steel as disclosed by Nakaoka et al. ('080) (col. 8, line 30 to col. 9, line 19). An ordinary skilled in the art would have optimized the result-effective variable, cooling rate, in Nakaoka et al. ('080) in view of Chatfield et al. ('218) at the time the invention was made in order to achieve desired microstructure and properties of the dual-phase steel of Nakaoka et al. ('080) in view of Chatfield et al. ('218). See MPEP 2144.05 II.

With respect to the amended claim 11 and claim 12, the ground of rejections of claims 9 and 10 as stated above is applied properly herein.

Response to Arguments

4. The applicant's arguments filed on May 7, 2007 have been fully considered but they are not persuasive.

First, the applicant argues that chromium is not an impurity in the instant invention and it is added to obtain the desired martensite percentage in the steel band microstructure of the instant invention. In response, Nakaoka et al. ('080) in view of

Chatfield et al. ('218) with a proper motivation as stated in the Office action of February 5, 2007 renders the claimed chromium content obvious.

Second, the applicant argues that the steel of Nakaoka et al. ('080) does not contain martensite at the end of the process. In response, the examiner notes Nakaoka et al. ('080) disclose that the final steel strip has a structure of ferrite and a low-temperature transformation phase (abstract). The volume ratio of the low-temperature transformation phase is up to 10% of the structure as a whole (col. 9, lines 3-7). As stated in the Office action of February 5, 2007, the same ferritic and martensitic structure would be expected in the steel sheet of Nakaoka et al. ('080) in view of Chatfield et al. ('218) as in the claimed steel strip. See MPEP 2112.01.

Third, the applicant argues that the process, the composition and the purpose of adding chromium of Chatfield et al. ('218) are different from those of the instant invention. In response, the examiner notes that combining Nakaoka et al. ('080) with Chatfield et al. ('218) with a proper motivation as stated in the Office action of February 5, 2007 renders both claimed composition and process obvious. Chatfield et al. add chromium to improve the hardenability of the steel of Chatfield et al. ('218) (col. 2, lines 8-16), which does not have to be the same as the purpose of the instant invention.

Fourth, the applicant argues that the process, the composition and the microstructure of Chatfield et al. ('218) are different from those of Nakaoka et al. ('080), therefore, one of ordinary skill in the art would have no reason to combine Nakaoka et al. ('080) and Chatfield et al. ('218). In response, the examiner notes that both Nakaoka et al. ('080) and Chatfield et al. ('218) disclose a method for producing a dual-phase

steel strip and both inventions are in the same art class of 148. The processes, the compositions and the microstructures of Nakaoka et al. ('080) and Chatfield et al. ('218) are similar. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the two in order to achieve desirable properties.

Fifth, the applicant argues that an improved drawability is the purpose of the instant invention but is not the purpose of Nakaoka et al. ('080) or Chatfield et al. ('218). In response, the examiner notes that the argument of the counsel cannot be relied upon as evidence. Nakaoka et al. ('080) list improving deep drawability as one of the top objectives of their invention (col. 4, lines 5-7).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZ

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

6/25/2007